

FIG. 1

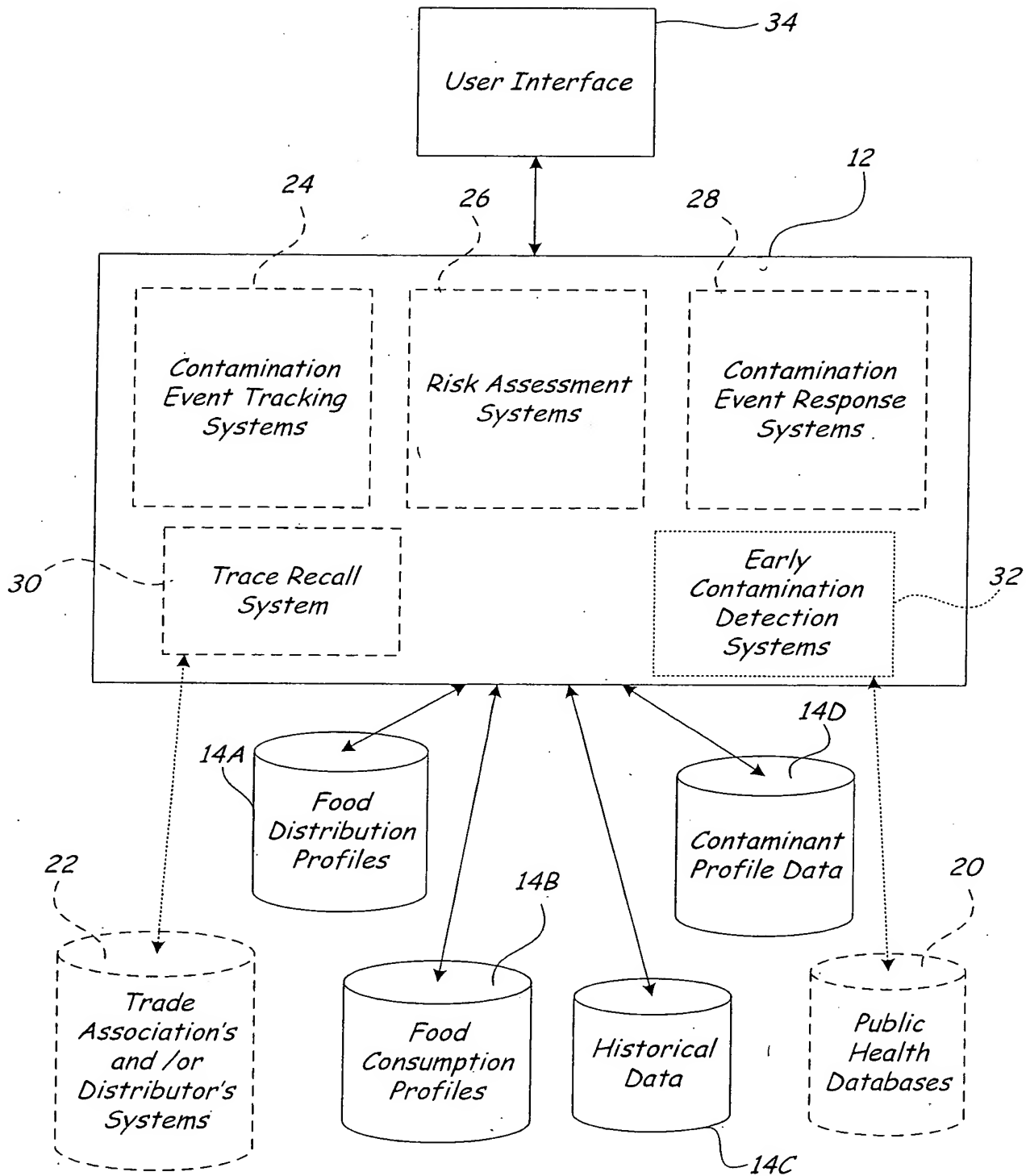


FIG. 2

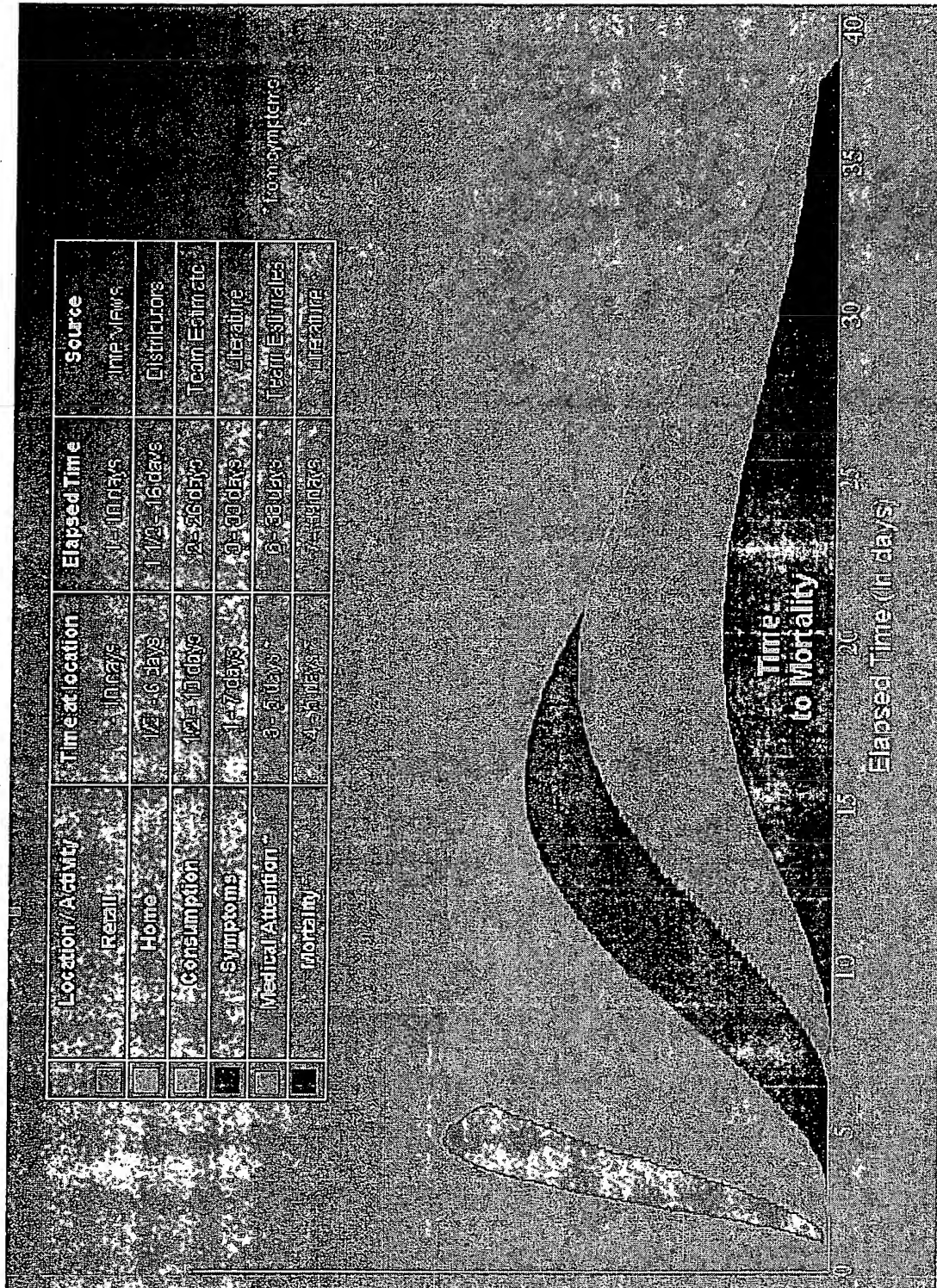


FIG. 3

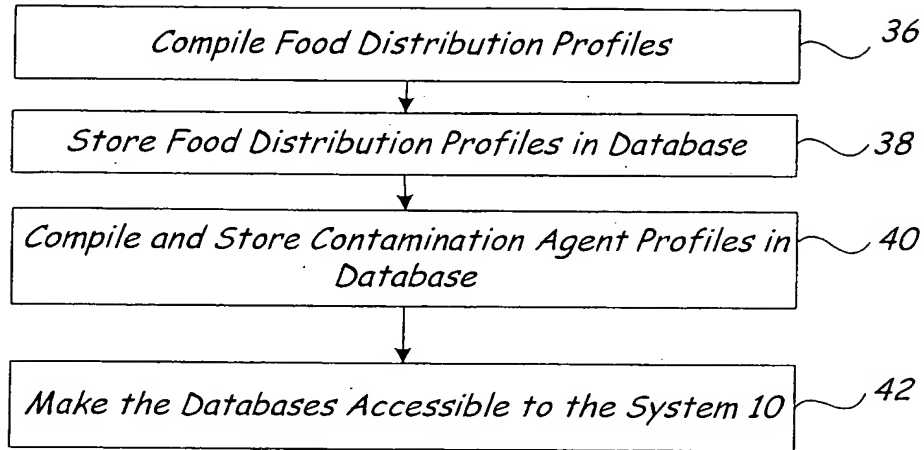


FIG. 4

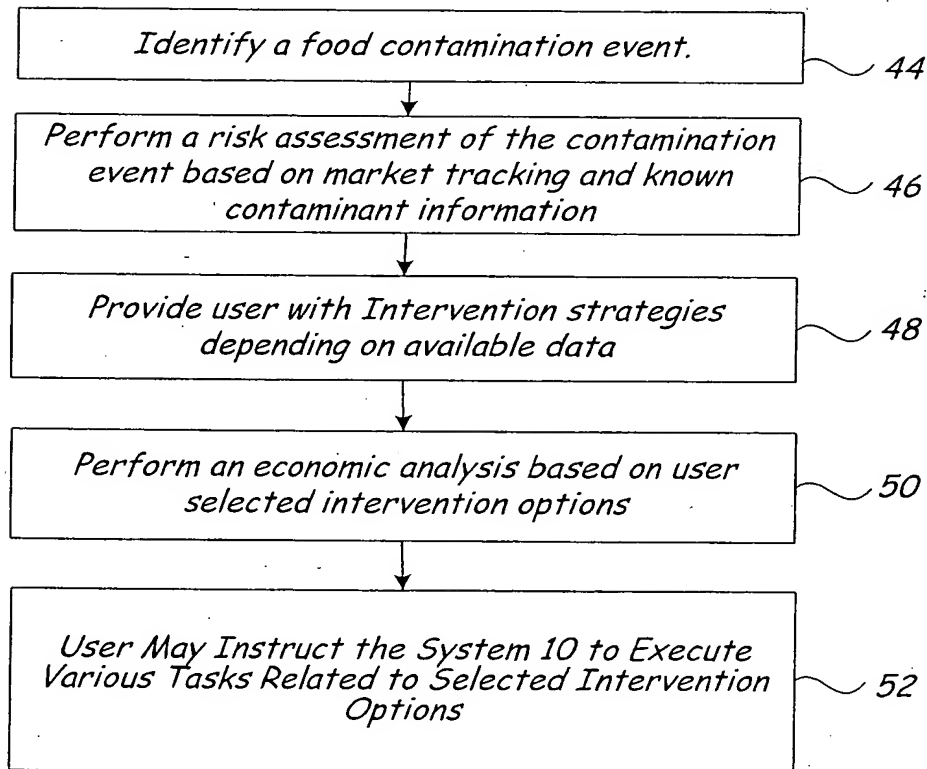


FIG. 5

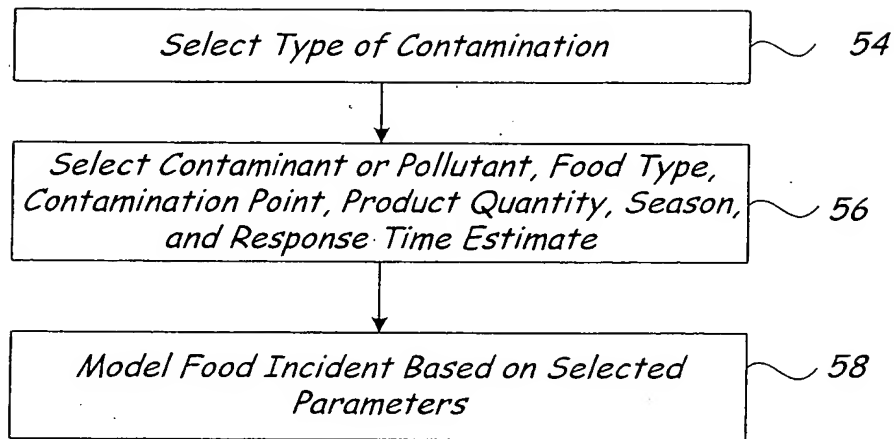


FIG. 6

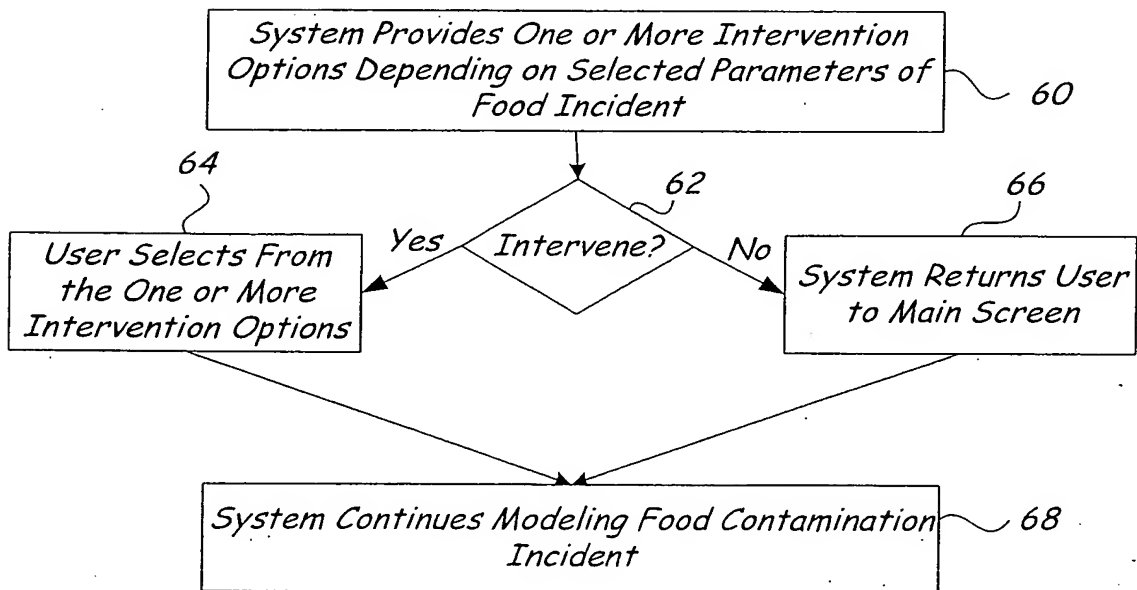


FIG. 7

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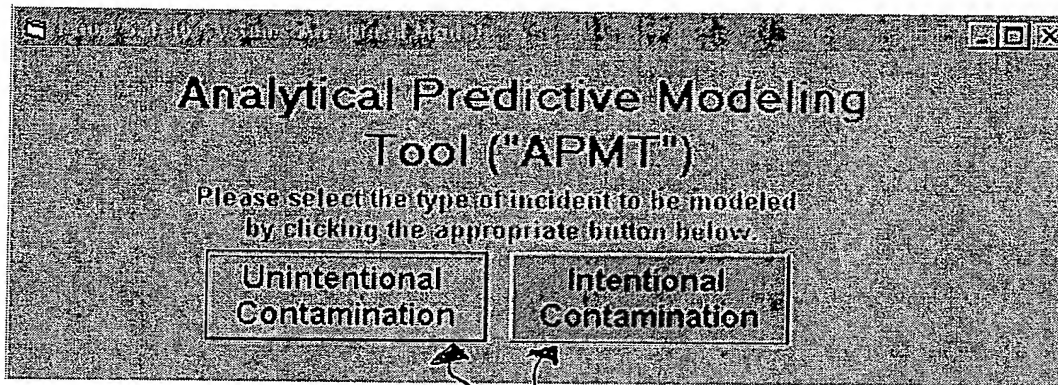


FIG. 8

70

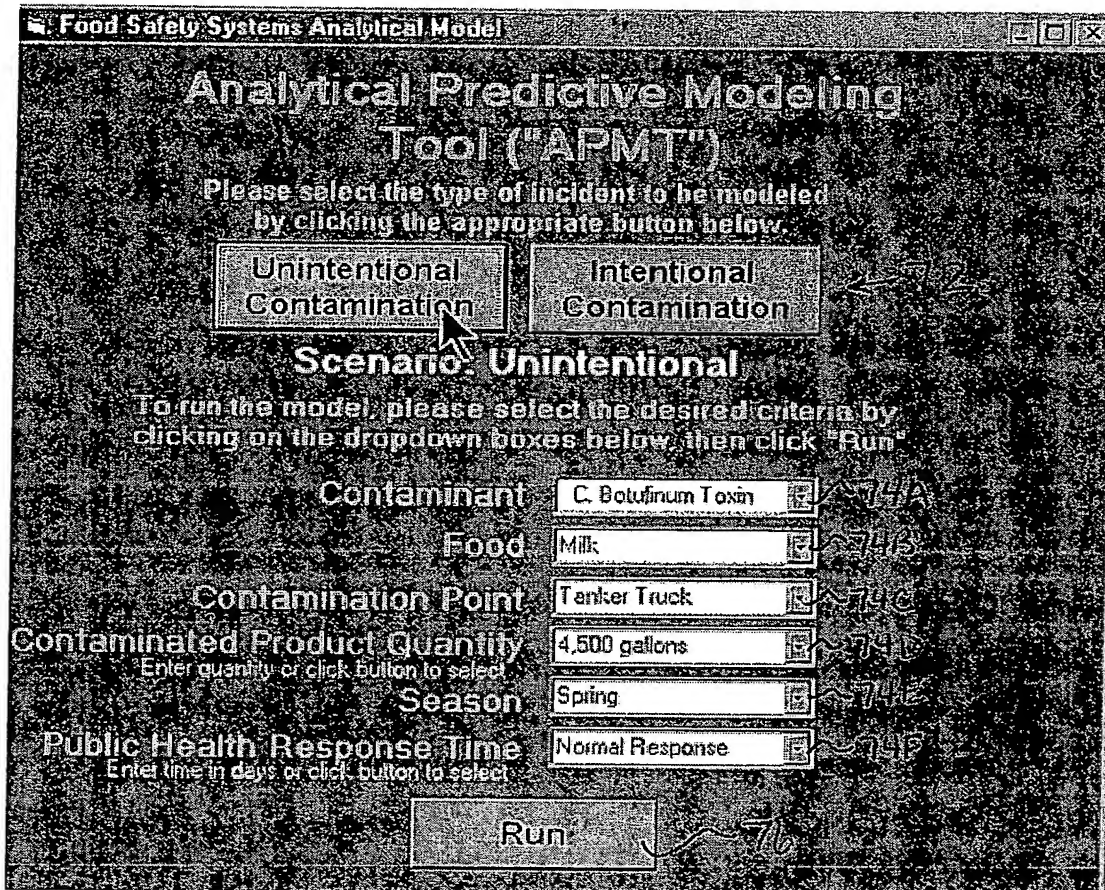


FIG. 9

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↙

Analytical Predictive Modeling Tool ("APMT")

Please select the type of incident to be modeled by clicking the appropriate button below.

Scenario: Intentional

To run the model, please select the desired criteria by clicking on the dropdown boxes below, then click "Run"

Agent

Food

Contamination Point

Contaminated Product Quantity
Enter quantity or click button to select

Season

Agency Response Time
Enter time in days or click button to select

76

FIG. 10

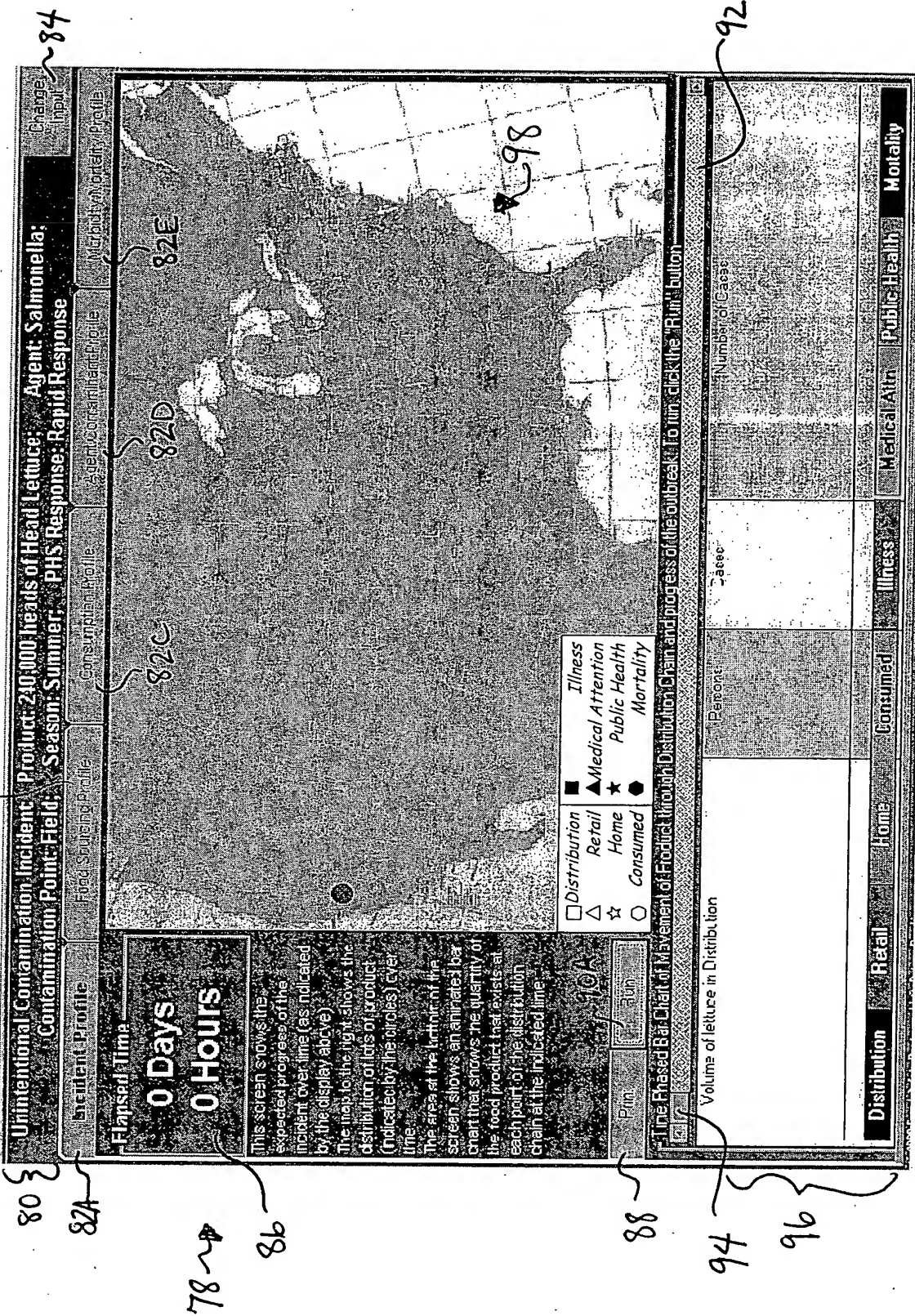


FIG. 11

78



FIG. 12

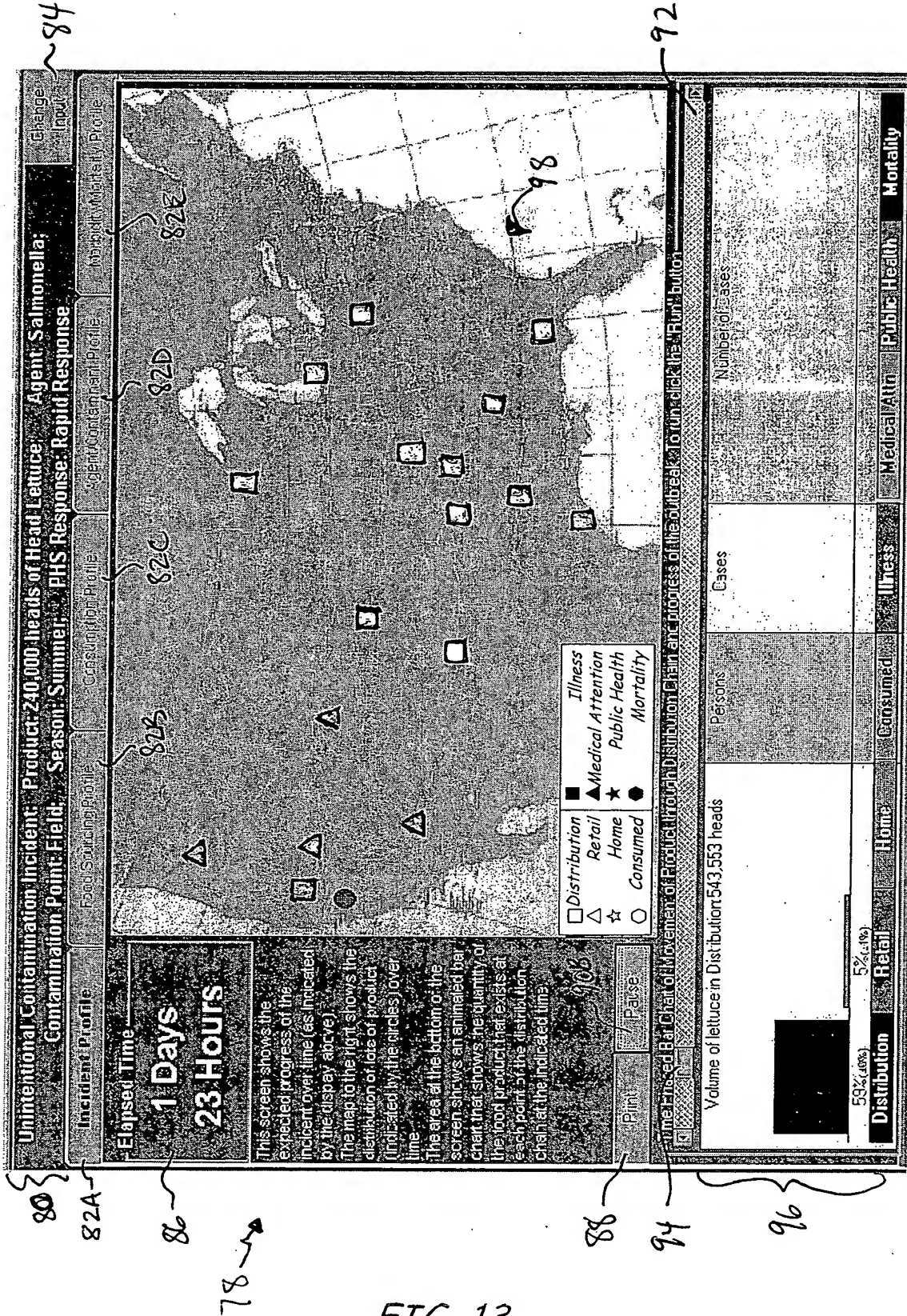


FIG. 13

Unintentional Contamination Incident: Product 240,000 heads of Head Lettuce; Agent: Salmonella; Contamination Point: Field; Season: Summer; PHS Response: Rapid Response

Incident Profile Food Sourcing Profile Consumption Profile Agent Containment Profile World Map Mortality Profile

Elapsed Time: **2 Days 22 Hours**

This screen shows the expected progress of the incident over time (as indicated by the display above). The map to the right shows the distribution of lots of product (indicated by the circles) over time. The area at the bottom of the screen shows an animated bar chart that shows the quantity of the food product that exists at each point of the distribution chain at the indicated time.

Legend:

- Distribution
- △ Retail
- ☆ Home
- Consumed
- Illness
- ▲ Medical Attention
- ★ Public Health
- Mortality

Time Phased Bar Chart of Movement of Product through Distribution Chain and progress of the outbreak. To unlock the "Run" button.

Volume of lettuce in Distribution: 730,943 heads

Distribution	Retail	Home	Consumed	Illness	Medical Attn	Public Health	Mortality
80% (1994)	12% (1994)	3% (1994)	90090 (1994)				

Number of Cases: 92

96

FIG. 14

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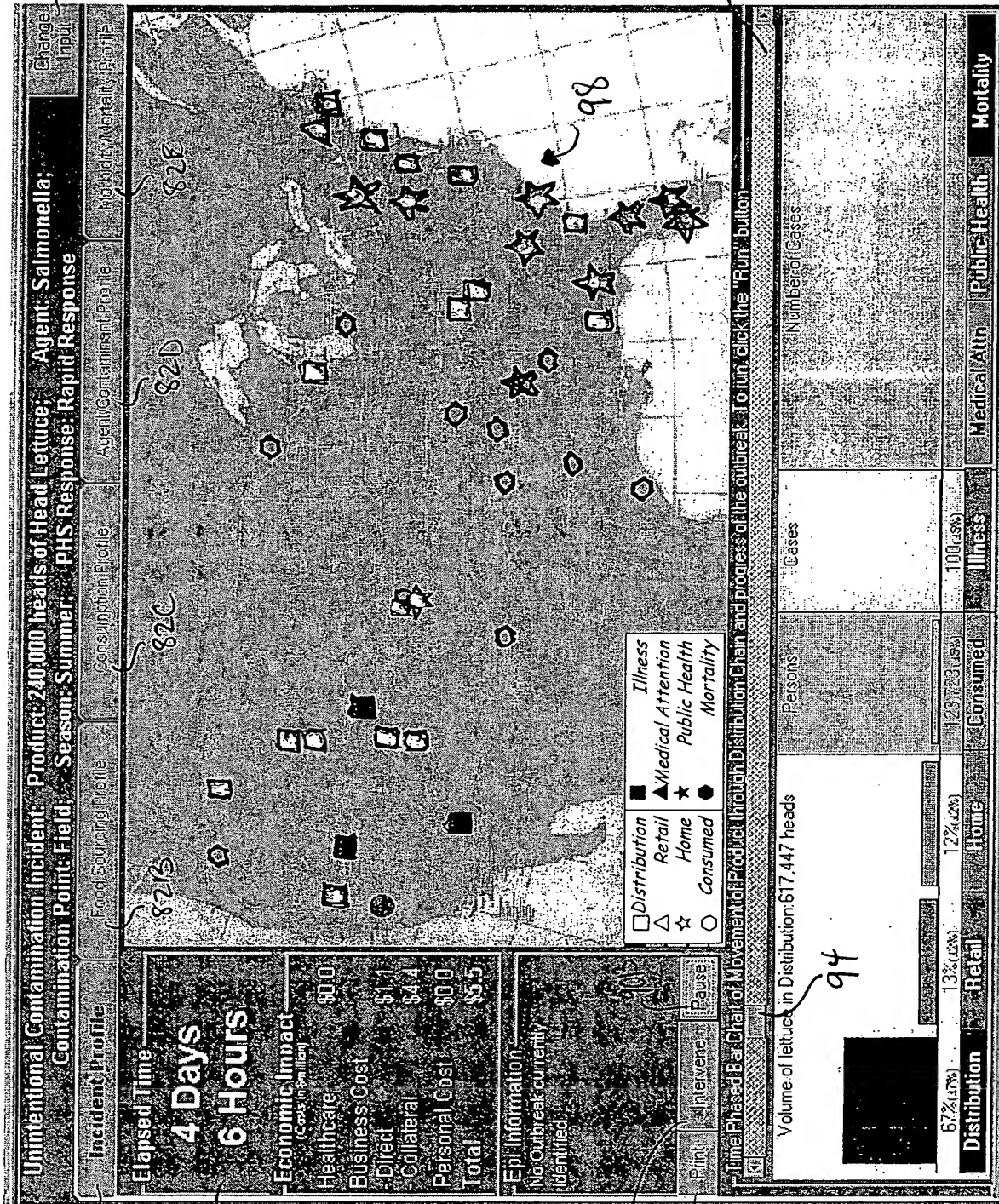
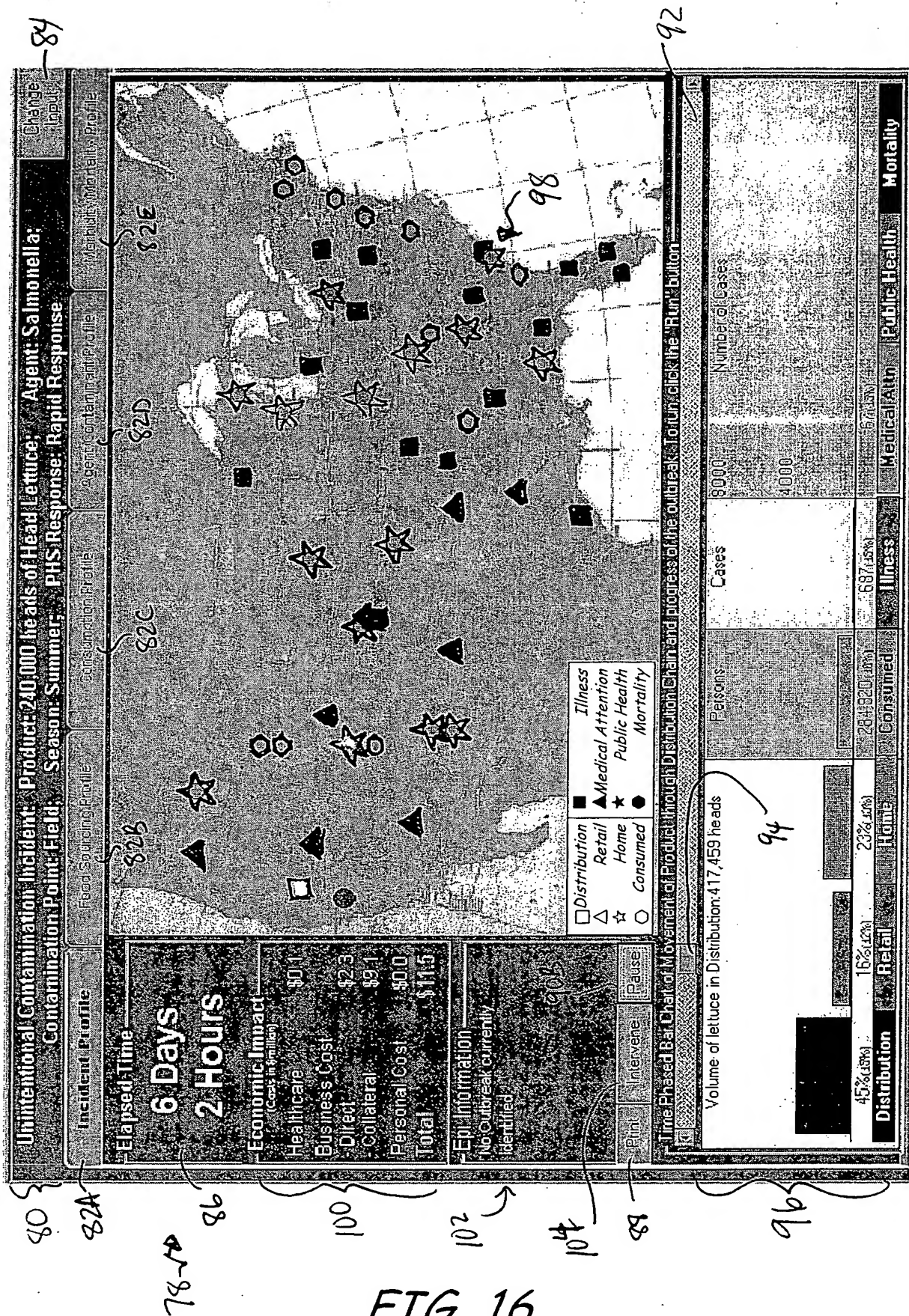


FIG. 15



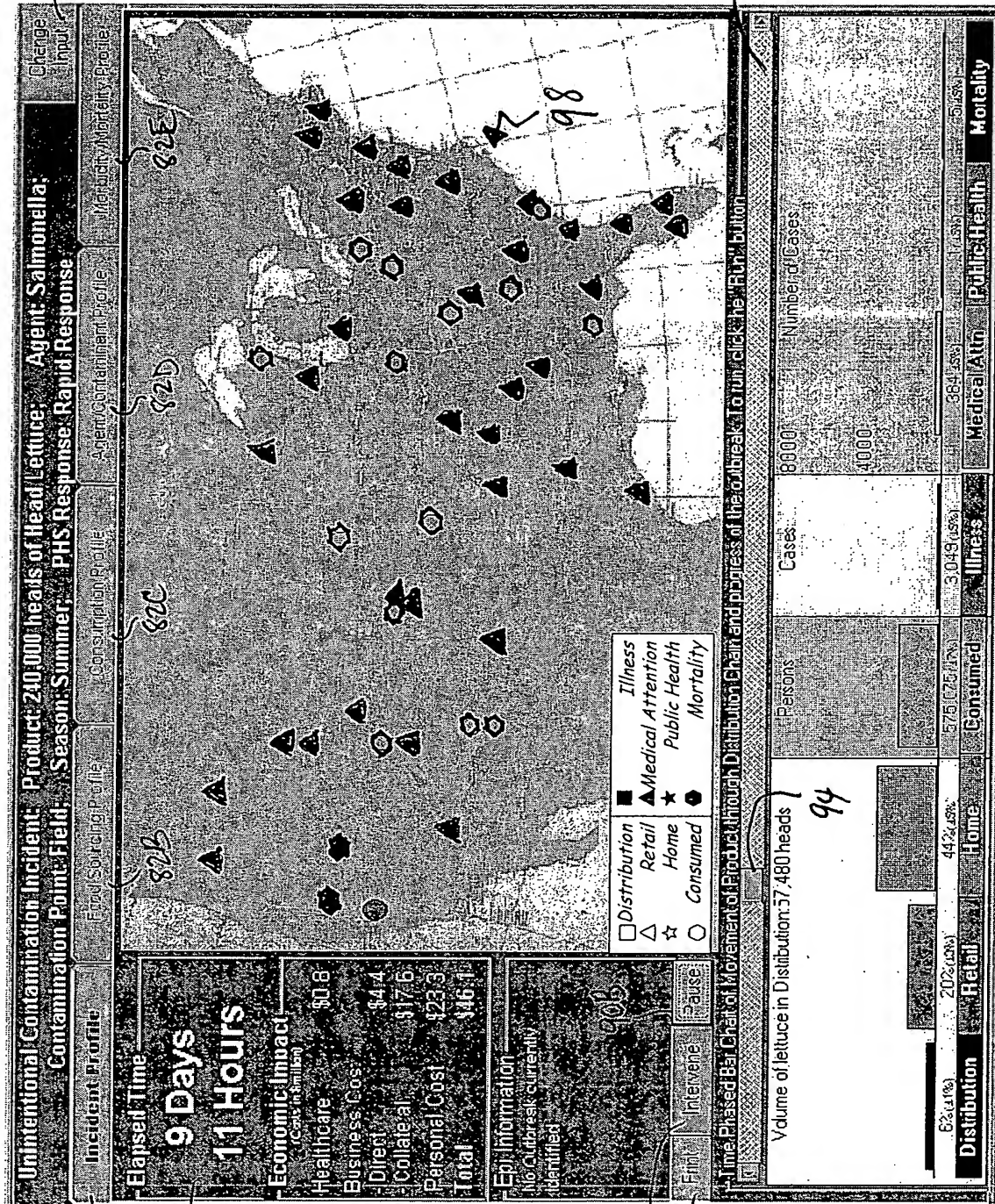
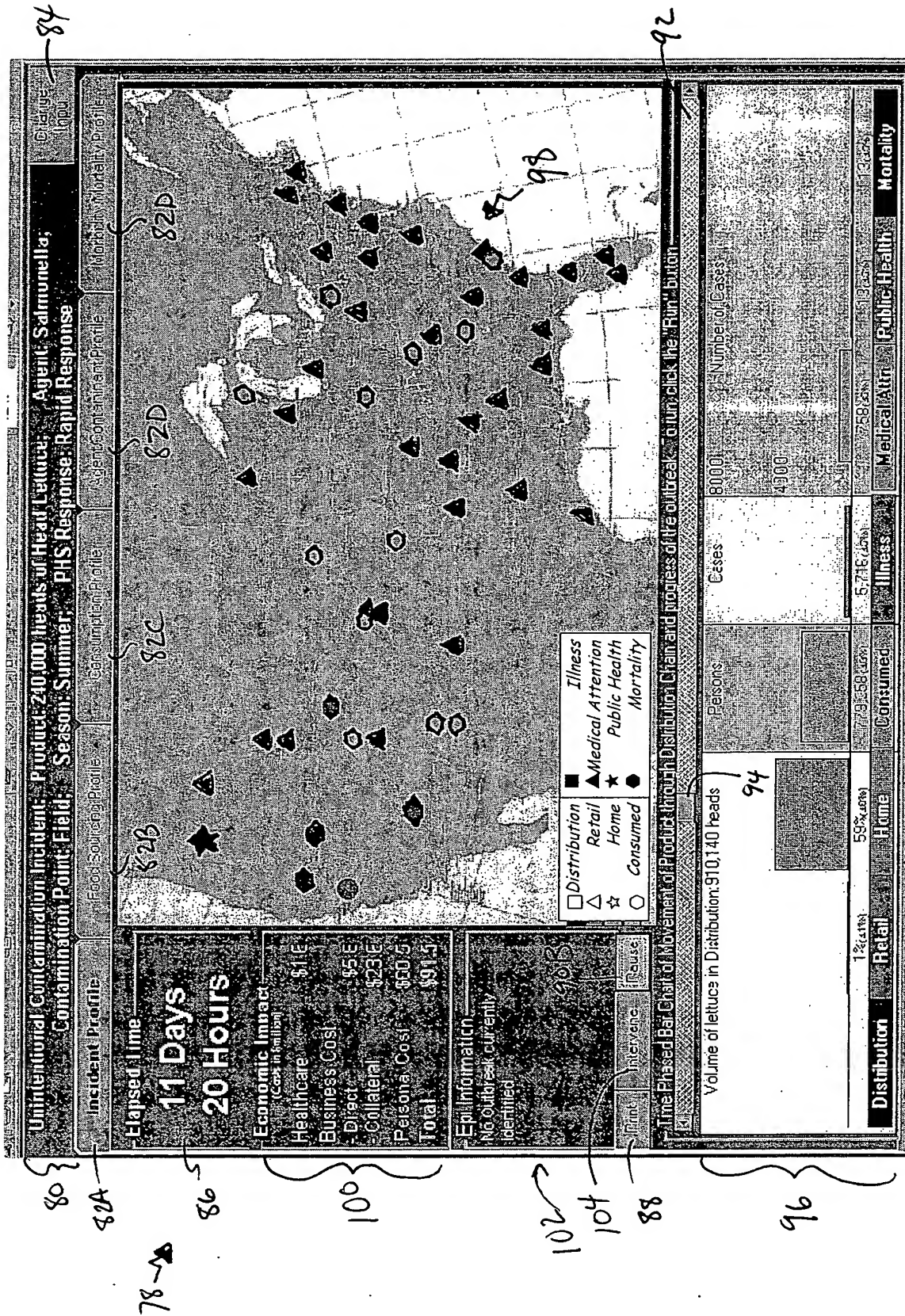


FIG. 17



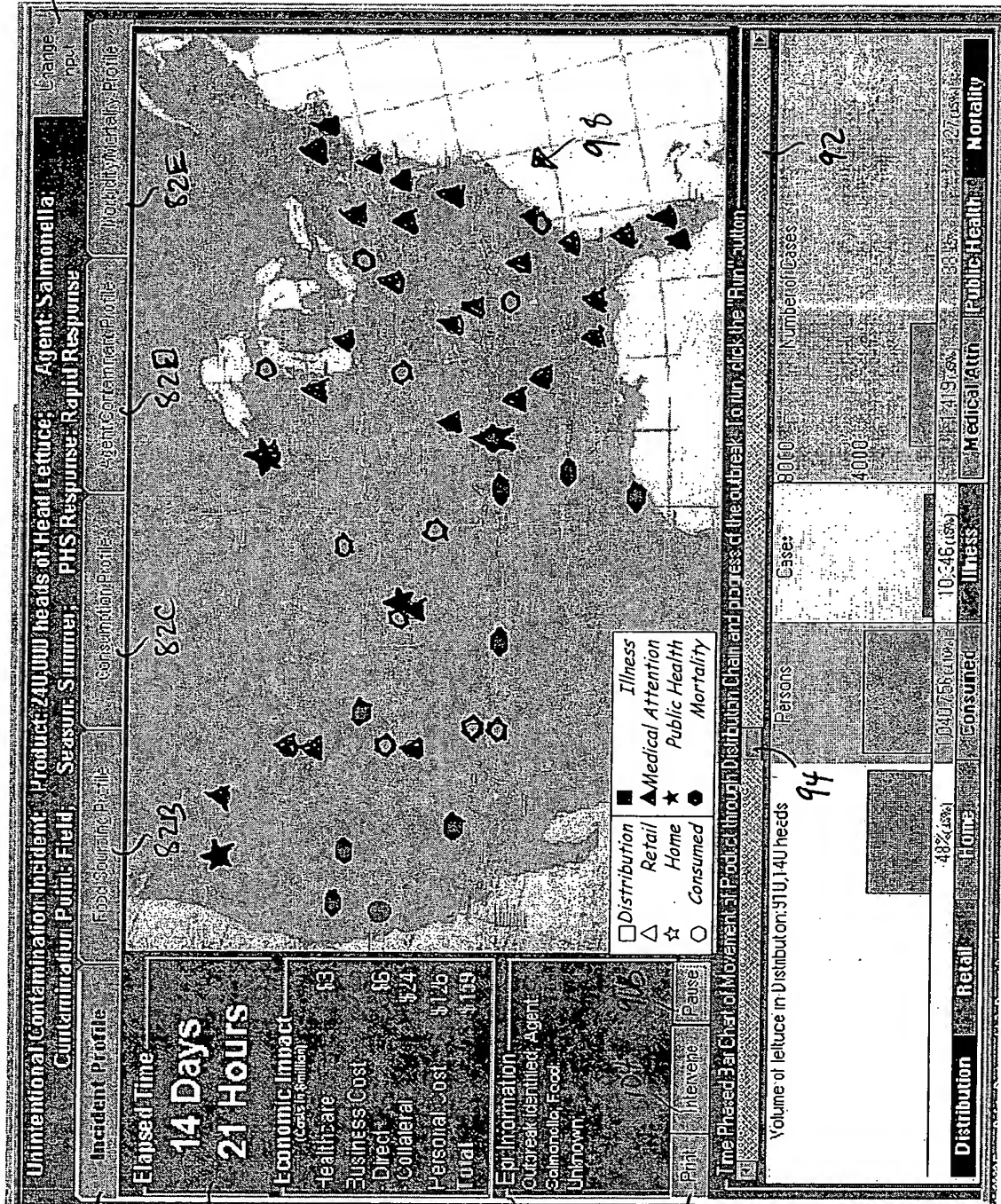


FIG. 19

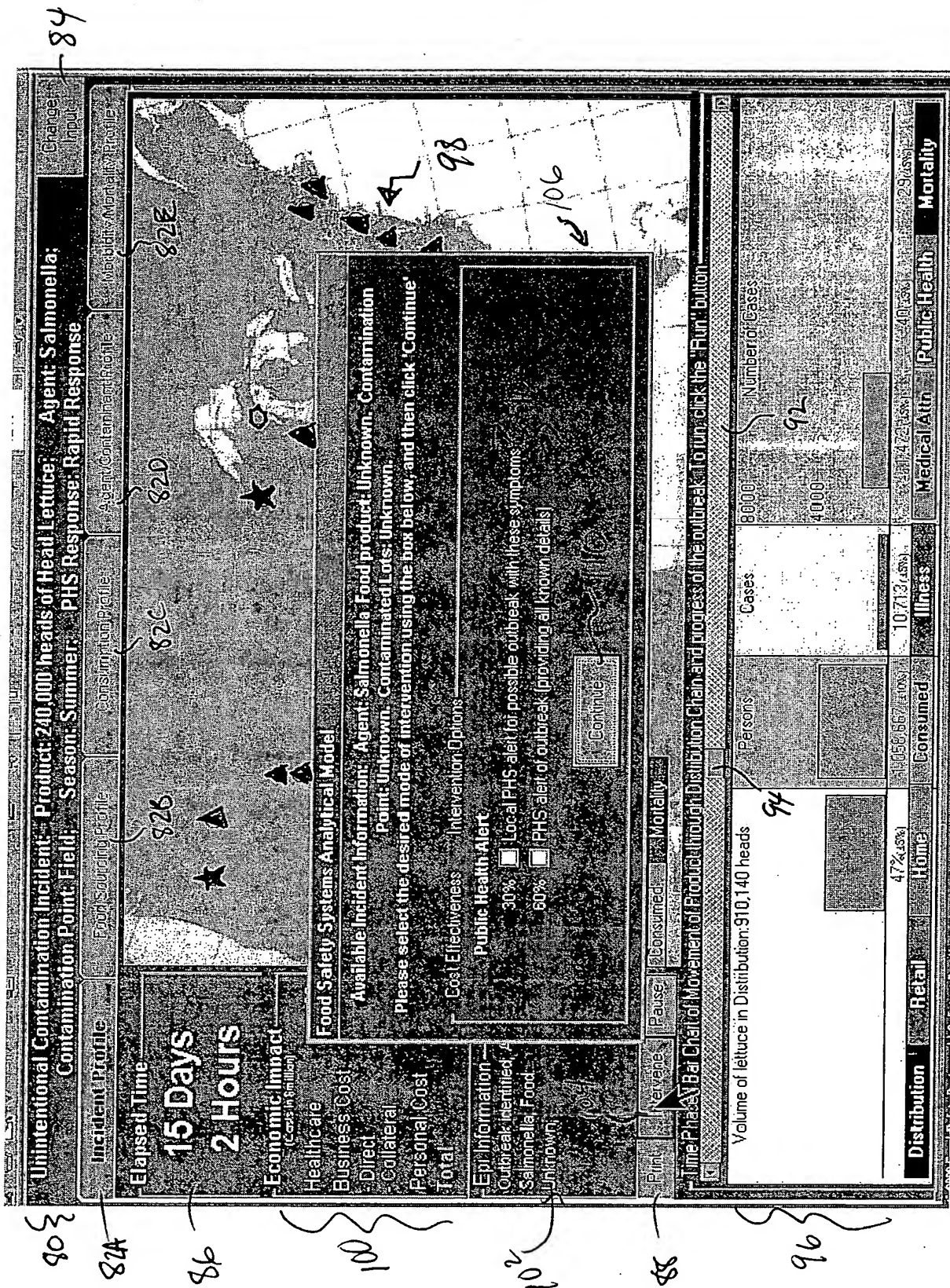


FIG. 20

Unintentional Contamination Incident: Product: 240,000 heads of Head Lettuce, Agent: Salmonella;
 Contamination Point: Field; Season: Summer; PHS Response: Rapid Response

Change Input
 Mortality/Morbidity Profile
 Agent/Contaminant Profile
 Consumption Profile
 Food Sourcing Profile

Incident Profile

Elapsed Time: **16 Days**
19 Hours

Economic Impact
 (Cost in millions)

Healthcare:
 Business Cost:
 Direct:
 Collateral:
 Personal Cost:
 Total:

Epi Information
 Outbreak Identified: ☒
 Salmonella Food: ☒
 Lettuce: ☒

Food Safety Systems Analytical Model

Available Incident Information: Agent: Salmonella, Food product: Head Lettuce, Contamination Point: Unknown, Contaminated Lots: Unknown

Please select the desired mode of intervention using the box below, and then click 'Continue'

Cost Effectiveness

30% ☐ Local PHS alert for possible outbreak with these symptoms

20% ☐ PHS alert of outbreak (providing all known details)

Public Announcement

30% ☐ National Public Announcement

Holds

60% ☐ In-store/center hold on all the identified food product

Recalls

90% ☐ National recall of all food product

Intervention Options

Public Health Alert

Continue

Volume of lettuce in distribution: 910,140 heads

Distribution	Retail	Home	Consumed	Illness	Medical/Attn	Public Health	Mortality
	39% (358)	209,117 (4103)	14,048 (283)				

FIG. 22

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187

84

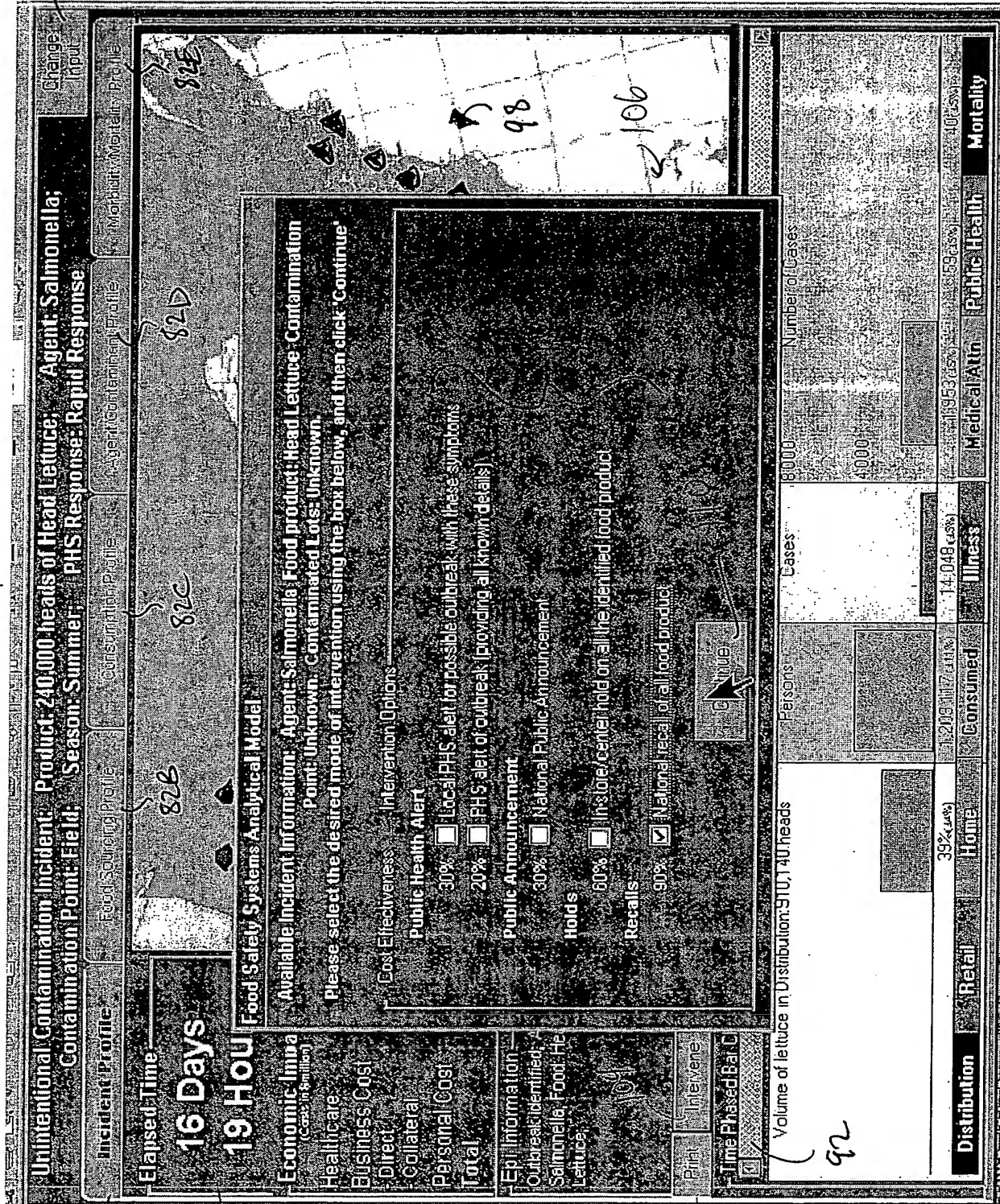


FIG. 23

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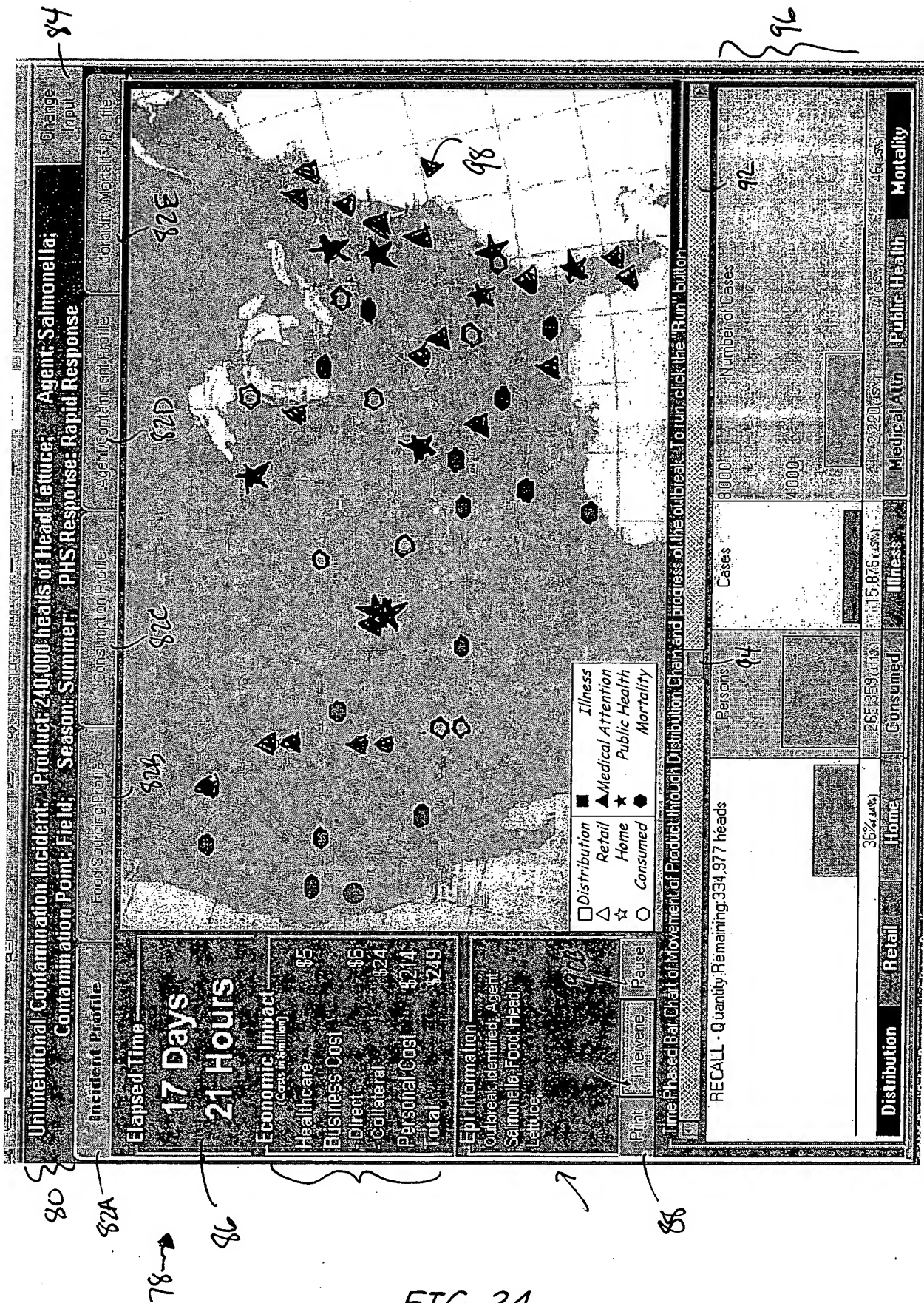


FIG. 24

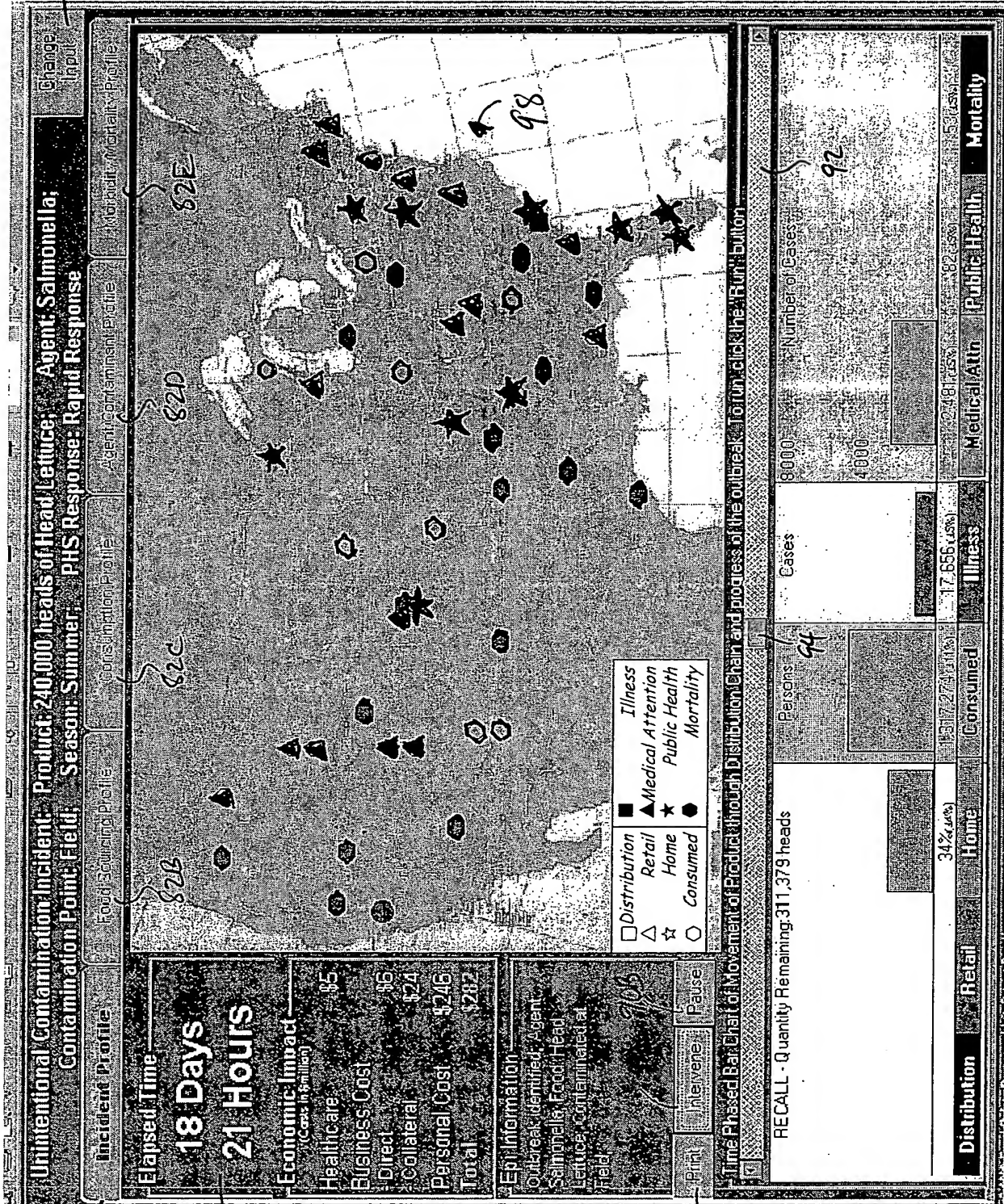


FIG. 25

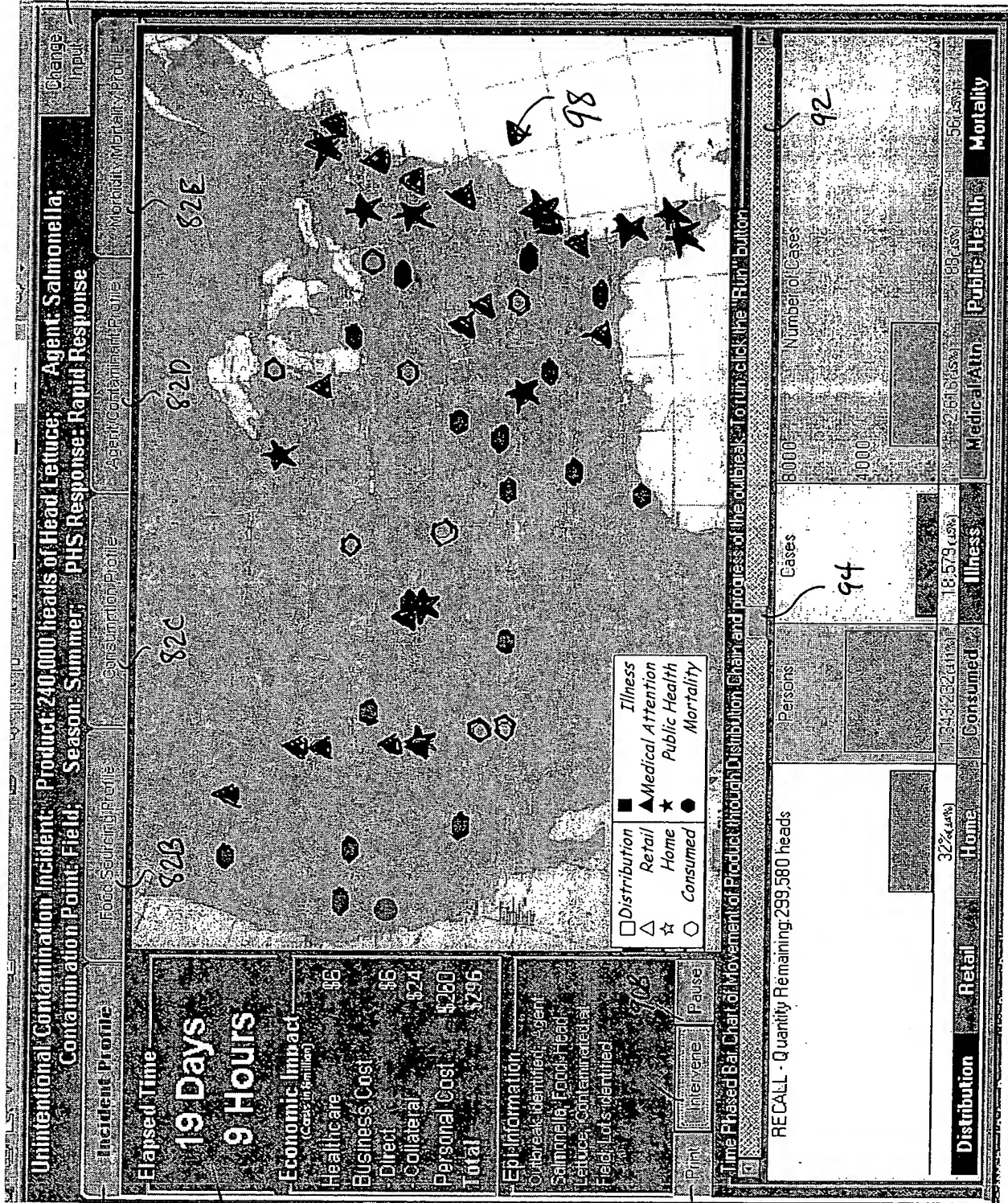


FIG. 25

Unintentional Contamination Incident: Product: 240,000 heads of Head Lettuce; Agent: Salmonella;
Contamination Point: Field; Season: Summer; PHS Response: Rapid Response

Incident Profile Food Sourcing Profile Consumption Profile Agent Contaminant Profile Mortality Profile

Elapsed Time
20 Days
9 Hour

Economic Impact
(Cost in millions)
Healthcare
Business Cost
Direct
Collateral
Personal Cost
Total

Epi. Information
Outbreak Identified:
Salmonella; Food: He
Lettuce; Contaminat
Field; Lots Identified

Intervention
Time Phased Bar

RECALL - QUE

Food Safety Systems Analytical Model

Available Incident Information: Agent: Salmonella; Food product: Head Lettuce; Contamination Point: Field; Contaminated Lots: Identified

Please select the desired mode of intervention using the box below, and then click 'Continue'

Cost Effectiveness **Intervention Options**

Public Health Alert
30% ☐ Local PHS alert for possible outbreak with these symptoms
20% ☐ PHS alert of outbreak (providing all known details)

Public Announcement
90% ☐ National Public Announcement

Holds
40% ☐ In-store/center hold on all the identified food product
35% ☐ In-store hold on all food product emanating from the point of contamination
30% ☐ In-store/center hold on all specific lots of contaminated food

Recalls
40% ☐ National recall of all food product
35% ☐ Recall of all lots of food product emanating from the point of contamination
80% ☐ Recall of the specific lots of food product that are contaminated

Containment
45% ☐ Containment of locations that contain contaminated food product

Continue

Distribution

30% US\$

Retail

17,111

Home

20,492 US\$

Consumed

1,001 US\$

Illness

2,887 US\$

Medical Attn

100 US\$

Public Health

63 US\$

Mortality

63 US\$

FIG. 26

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Unintentional Contamination Incident: Product: 240,000 heads of Head Lettuce; Agent: Salmonella;
 Contamination Point: Field; Season: Summer; PHS Response: Rapid Response

Incident Profile Food Source Profile Contaminated Profile Availability/Mortality Profile

Elapsed Time: **20 Days** **9 Hour**

Economic Impact (Cost in millions)
 Healthcare: Business Cost:
 Direct: Collateral:
 Personal Cost: Total:

Epi Information
 Outbreak identified: Salmonella: Food: Lettuce: Contaminated: Field: Lots identified:

Intervene **Recall** **Time Phased Recall** **Recall - Queue**

Food Safety Systems Analytical Model

Available Incident Information: Agent: Salmonella; Food product: Head Lettuce; Contamination Point: Field; Contaminated Lots: Identified

Please select the desired mode of intervention using the box below, and then click 'Continue'

Cost Effectiveness

Public Health Alert

30% ☐ Local PHS alert for possible outbreak with these symptoms

20% ☐ PHS alert of outbreak (providing all known details)

Public Announcement

90% ☒ National Public Announcement

Holds

40% ☐ In-store/center hold on all the identified food product

35% ☐ In-store hold on all food product emanating from the point of contamination

90% ☐ In-store/center hold on all specific lots of contaminated food

Recalls

40% ☐ External recall of all food product

35% ☐ Recall of all lots of food product emanating from the point of contamination

90% ☐ Recall of the specific lots of food product that are contaminated

Containment

45% ☐ Containment of locations that contain contaminated food product

Continue

Distribution **Retail** **Home** **Consumed** **Illness** **Medical Attn** **Public Health** **Mortality**

30% (max) 11,355 (47,411) 20,492 (450) 2,897 (450) 100 (450)

803 82A 96 78 100 102 92 96

FIG. 27

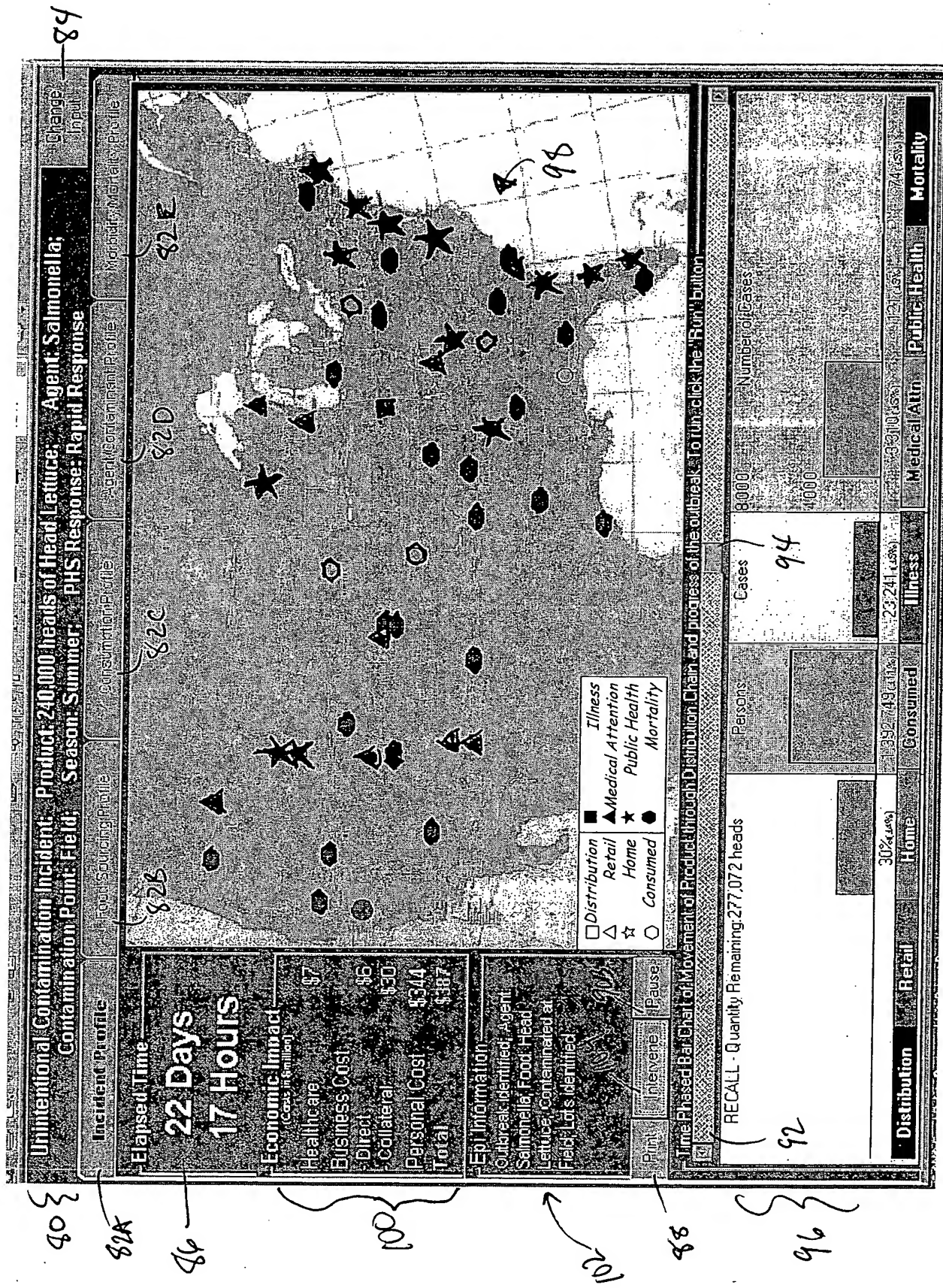


FIG. 28

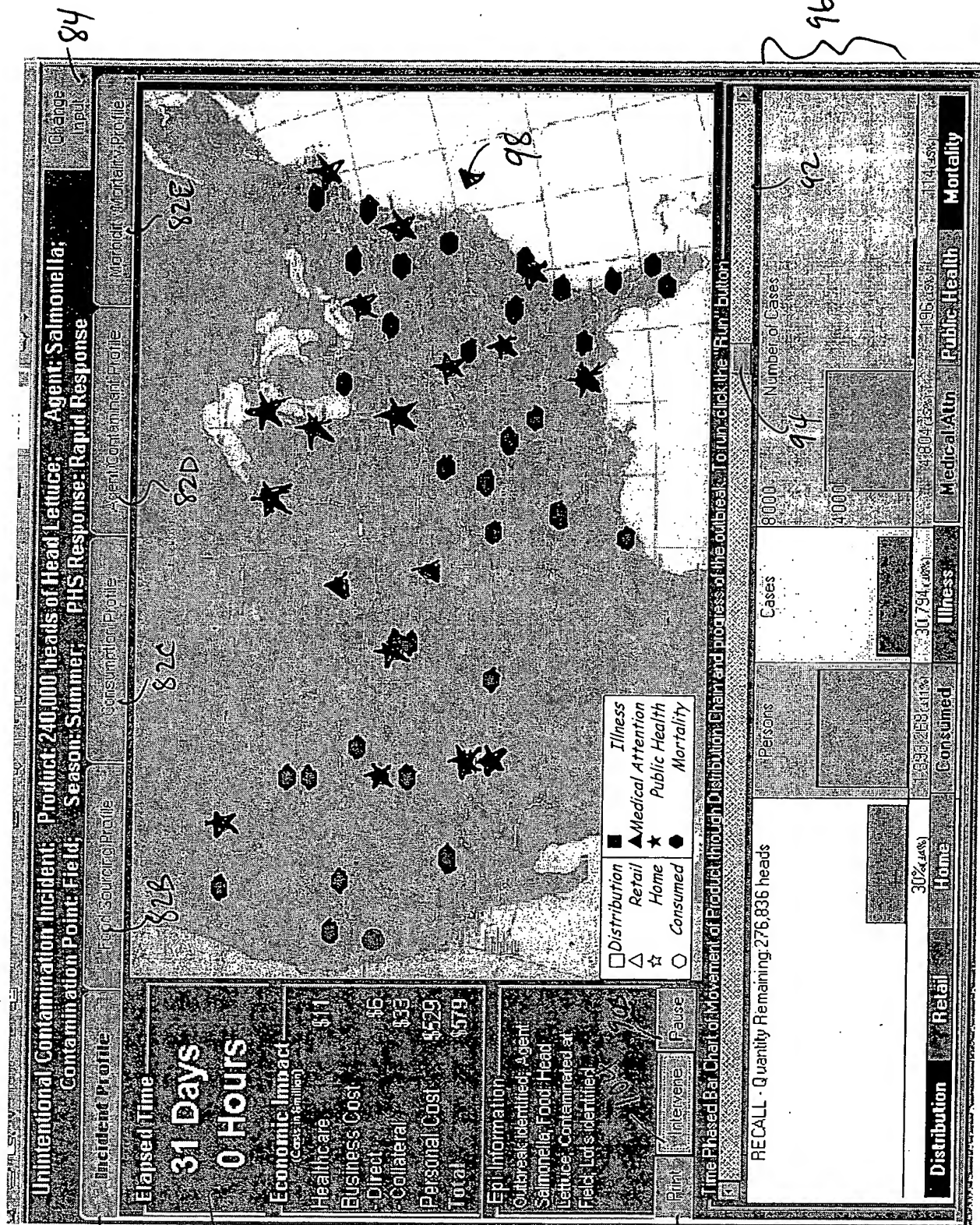


FIG. 29

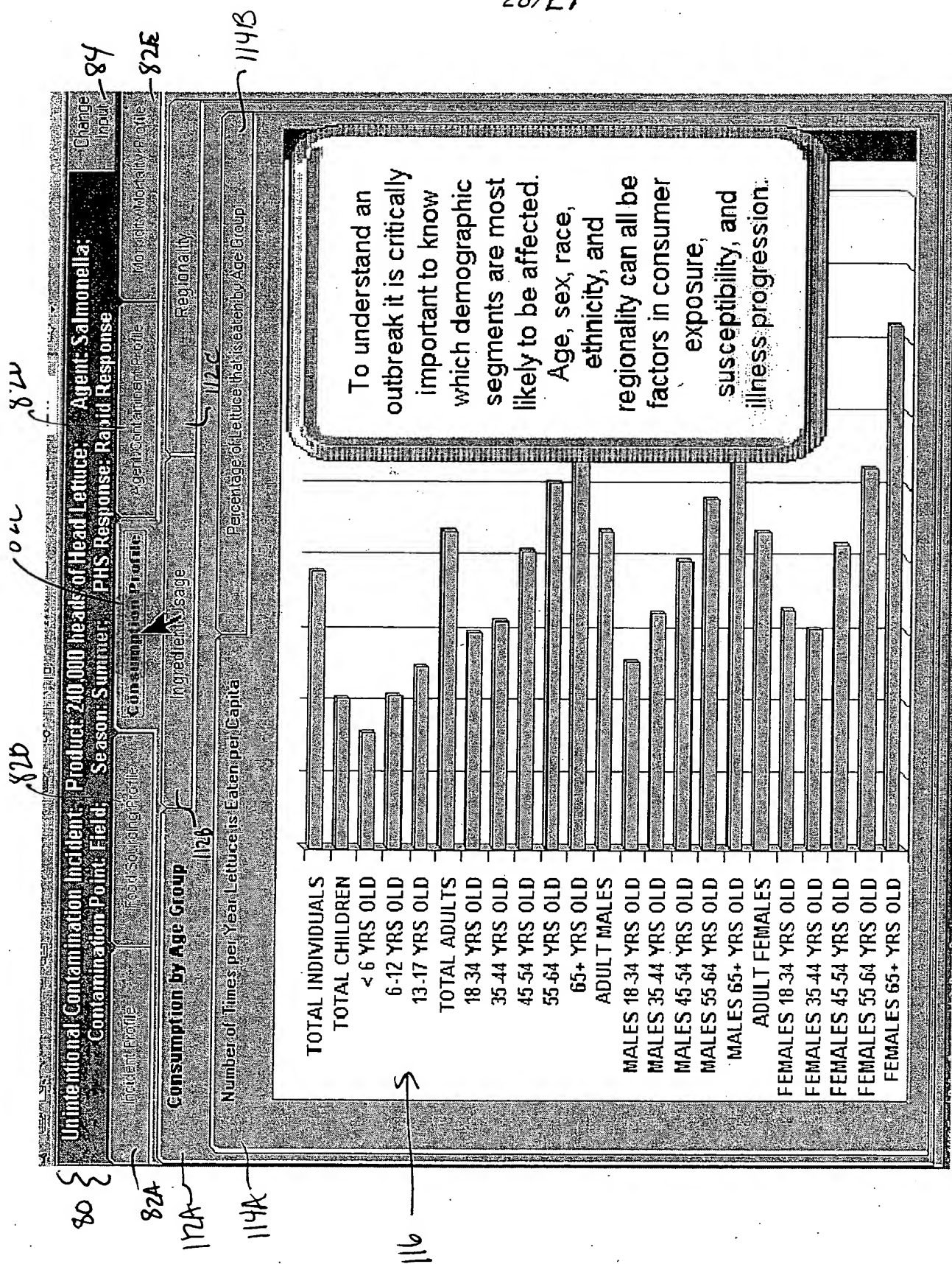


FIG. 30

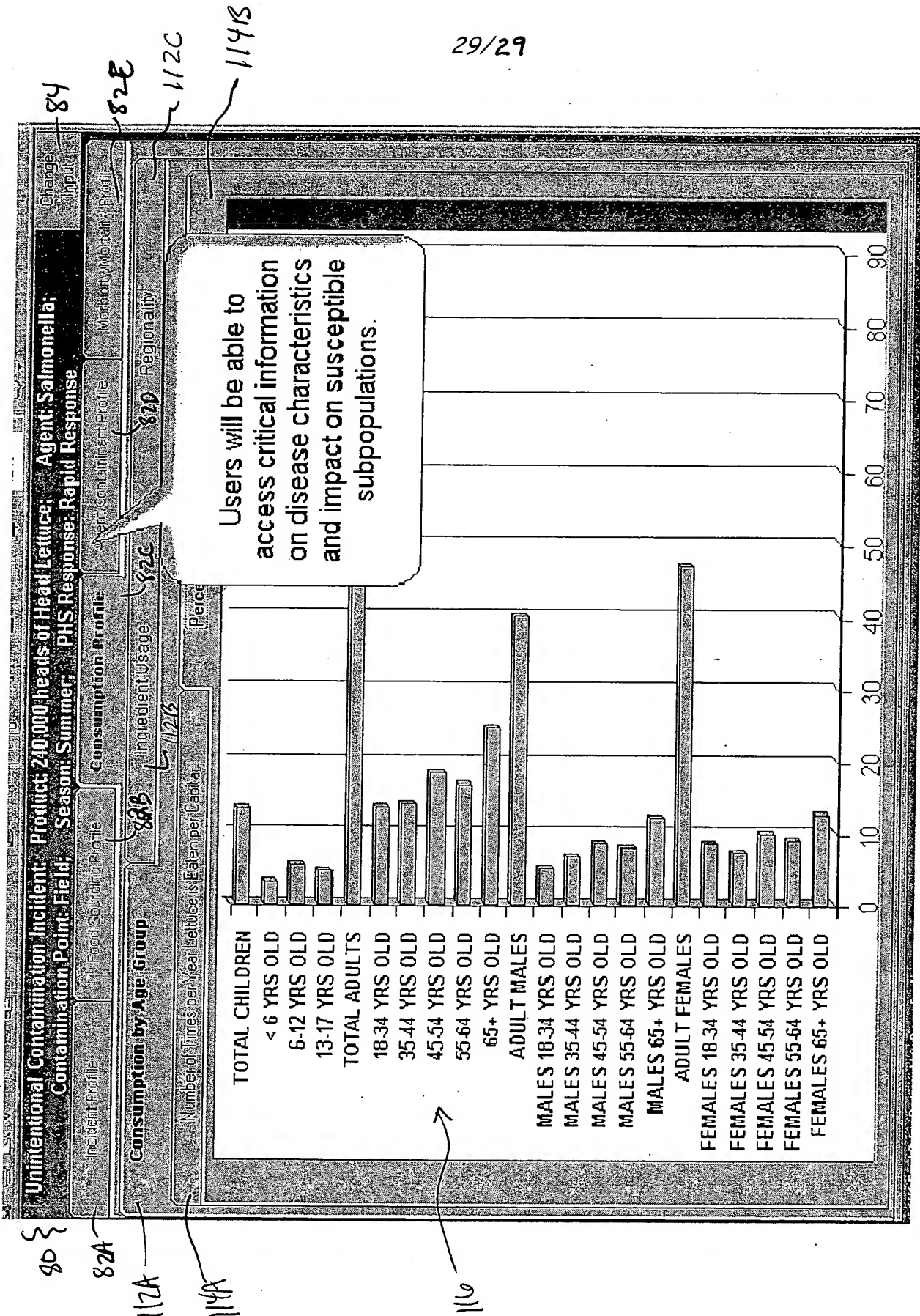


FIG. 31